

**Datasheet for #sbcw19760 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**WARNING:** Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

**WARNING:** Beware of the polarity of the laser. This laser has to be powered with negative bias and positive bias on the specific zones drawn below. To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.

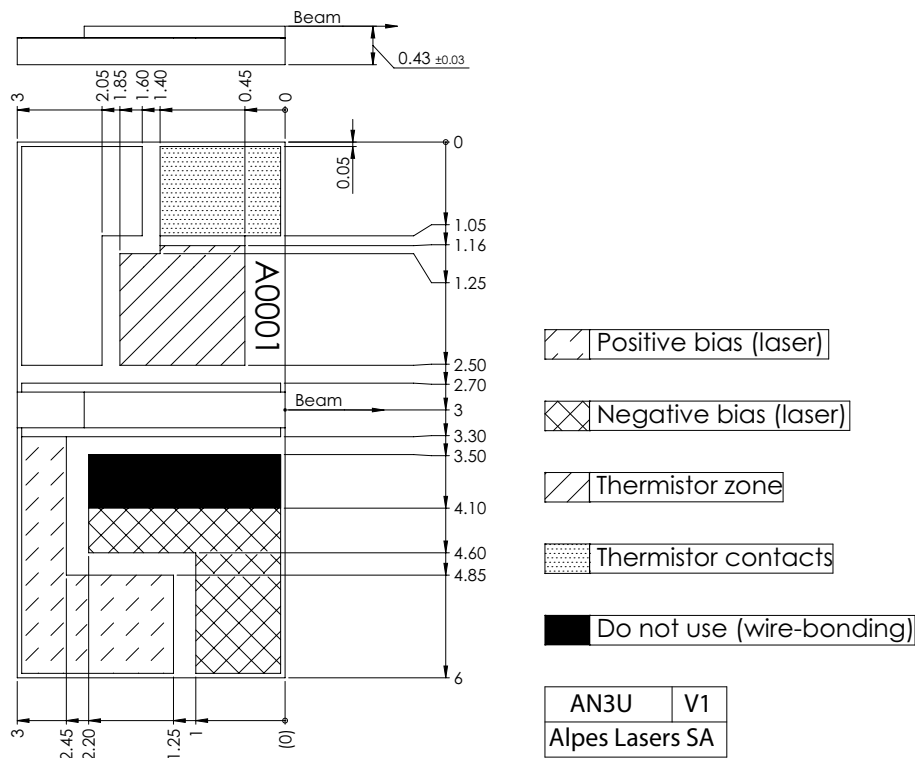


Figure 1: Mechanical and electrical interface for #sbcw19760 DN (please note that AlN submount numbering is A0T59)

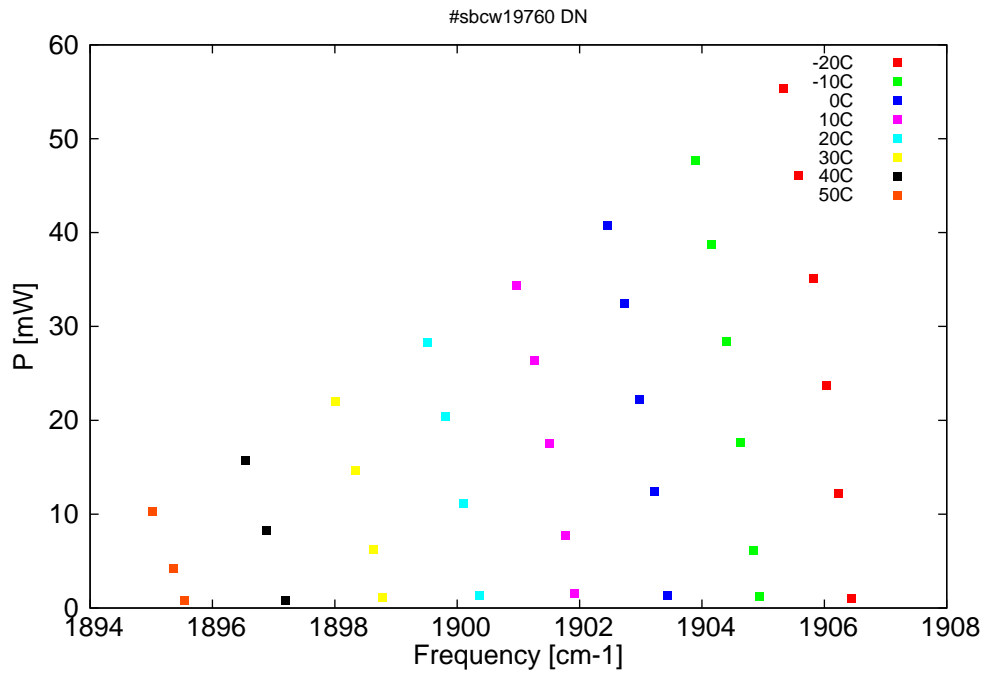


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

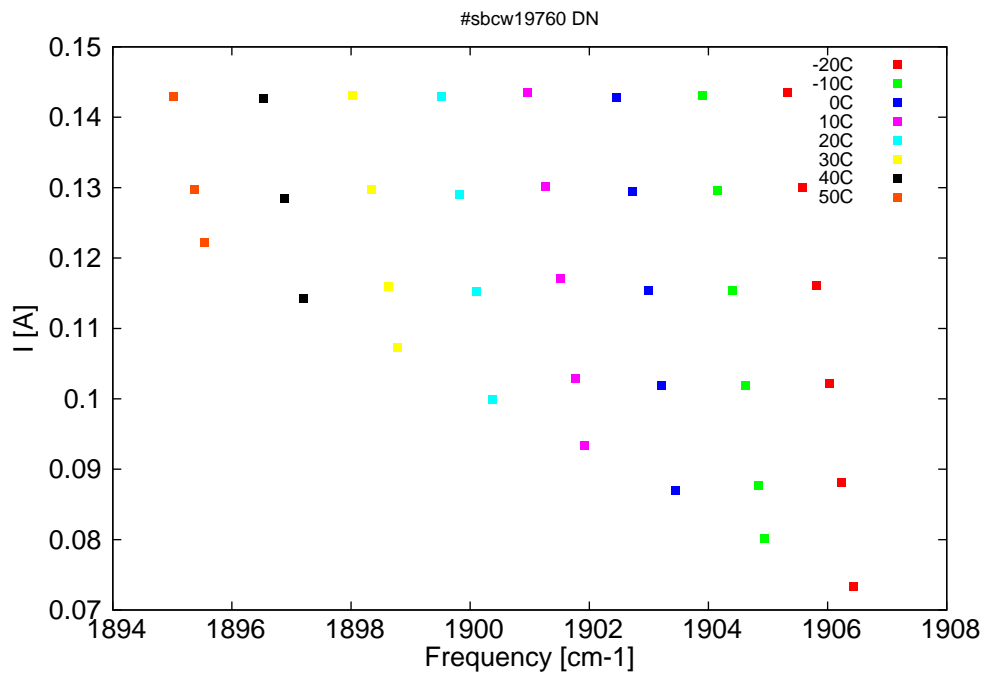


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5245.4	1906.4	1	-20	7.6	0.073
5245.9	1906.2	12.2	-20	7.81	0.088
5246.5	1906	23.8	-20	8.01	0.102
5247.1	1905.8	35.1	-20	8.22	0.116
5247.7	1905.6	46.1	-20	8.45	0.13
5248.4	1905.3	55.4	-20	8.68	0.144
5249.5	1904.9	1.2	-10	7.62	0.08
5249.8	1904.8	6.1	-10	7.73	0.088
5250.4	1904.6	17.6	-10	7.93	0.102
5251	1904.4	28.4	-10	8.13	0.115
5251.7	1904.2	38.7	-10	8.36	0.13
5252.4	1903.9	47.6	-10	8.59	0.143
5253.6	1903.4	1.3	0	7.69	0.087
5254.3	1903.2	12.4	0	7.91	0.102
5254.9	1903	22.2	0	8.11	0.115
5255.6	1902.7	32.5	0	8.34	0.129
5256.4	1902.4	40.8	0	8.57	0.143
5257.9	1901.9	1.5	10	7.77	0.093
5258.2	1901.8	7.7	10	7.91	0.103
5259	1901.5	17.5	10	8.13	0.117
5259.7	1901.3	26.4	10	8.34	0.13
5260.5	1901	34.4	10	8.58	0.144
5262.1	1900.4	1.4	20	7.85	0.1
5262.9	1900.1	11.1	20	8.09	0.115
5263.7	1899.8	20.5	20	8.32	0.129
5264.5	1899.5	28.3	20	8.57	0.143
5266.5	1898.8	1.2	30	7.94	0.107
5267	1898.6	6.2	30	8.08	0.116
5267.8	1898.3	14.7	30	8.31	0.13
5268.7	1898	22	30	8.56	0.143
5270.9	1897.2	0.8	40	8.03	0.114
5271.8	1896.9	8.3	40	8.27	0.128
5272.8	1896.5	15.7	40	8.53	0.143
5275.5	1895.5	0.8	50	8.16	0.122
5276	1895.4	4.2	50	8.29	0.13
5277	1895	10.3	50	8.53	0.143

Table 1: Singlemode optical output power as function of operating parameters.

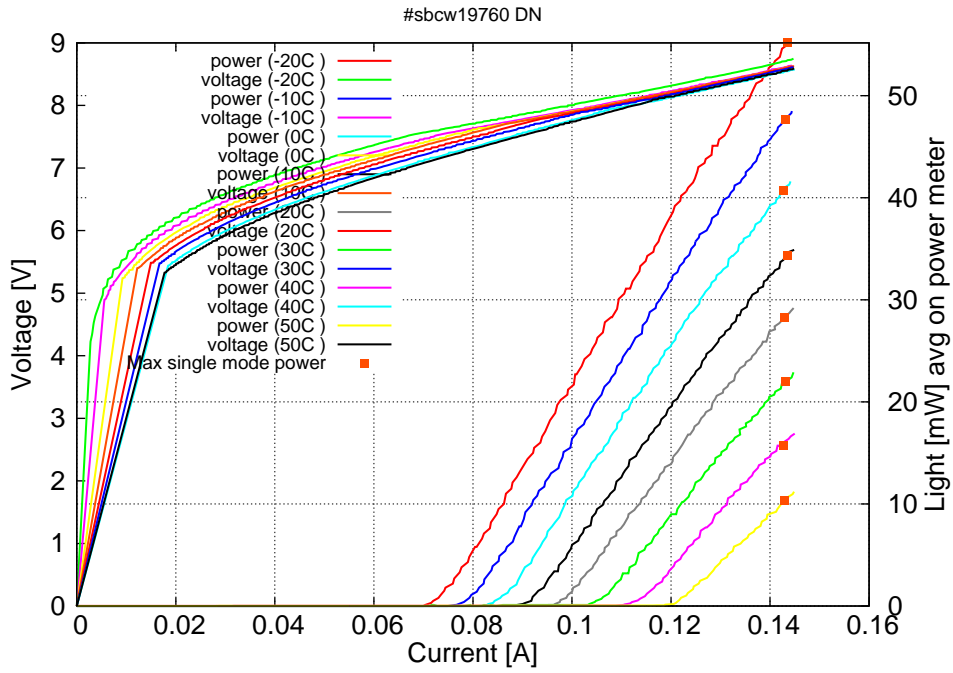


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=7.6V$  (2-wires measurements). Maximum operation current: 0.145A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

